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THROUGH A TEST TUBE DARKLY: ARTIFICIAL INSEMINATION AND THE LAW

George P. Smith, II*

THE shadowy predictions of Huxley and Orwell can no longer be dismissed as blurred and unrealistic prophecies. In *Nineteen Eighty-Four*, Orwell envisioned an era in which artificial insemination was the central method of reproduction.¹ And in *Brave New World*, the Director of Hatcheries and Conditioning described a technique known as "Bokanovsky's Process" whereby artificial fertilization of human eggs was accomplished in an assembly-line operation.² These prospects have now come into direct focus; for artificial fertilization has been achieved experimentally. In 1944, Dr. John Rock of Harvard University was credited with having fertilized a human egg under laboratory conditions.³ In 1961, a team of doctors at the University of Bologna in Italy reported their success in achieving human fertilization in a test tube.⁴ In this experiment, an ovum was secured by surgery and placed in a container filled with amniotic fluid, and the male seed was then introduced. The embryo lived and developed for twenty-nine days, at which time the experiment was terminated because of abnormalities in cellular division.⁵

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1. G. ORWELL, *NINETEEN EIGHTY-FOUR* 66 (Harcourt, Brace & Co. ed. 1949): "Sexual intercourse was to be looked on as a slightly disgusting minor operation, like having an enema. . . . All children were to be begotten by artificial insemination (*artsem* it was called in Newspeak) and brought up in public institutions."

2. A. HUXLEY, *BRAVE NEW WORLD* 2-19 (1932): "These . . . are the incubators. . . . The week's supply of ova . . . kept . . . at blood heat; whereas the male gametes . . . have to be kept at thirty-five instead of thirty-seven. Full blood heat sterilizes." The Director observed that this "modern" fertilizing process was "undergone voluntarily for the good of Society," and the participants received "a bonus amounting to six months' salary." He described the technique for preserving the excised ovary and then outlined the process whereby the eggs—"immersed in a warm bouillon containing free swimming spermatozoa"—were ripened: "One egg, one embryo, one adult—normality. But a bokanovskified egg will bud, will proliferate, will divide. From eight to ninety-six buds, and every bud will grow into a perfect embryo, and every embryo into a full-sized adult. Making ninety-six human beings grow where only one grew before. Progress."

3. See *Baby in a Bottle*, 104 *AMERICA* 560 (1961).

4. See *Test-Tube Tempest*, 57 *NEWSWEEK* 78 (1961).

5. *Baby in a Bottle*, *supra* note 3, at 560. A Chinese scientist, Chang Tso-kan, reportedly commented that, "If children can be had without being conceived, the work and labor of mothers need not be affected by child birth. This is happy news for women." 105 *AMERICA* 402 (1961).

Between human beings, artificial insemination⁶ may be accomplished in two principal ways. Semen may be secured from the husband and injected by instrument into the wife's reproductive tract in order to induce pregnancy. This process is known as *homologous insemination* or A.I.H. Alternatively, semen from a third party donor may be introduced into the female for the same purpose. This process, known as *heterologous insemination*, or A.I.D., is the more prevalent of the two procedures⁷ and the one which raises the most difficult legal issues.

A surge of interest and direct involvement with artificial insemination has interposed complicated and presently unsolved legal, social, cultural, religious, emotional, and psychological problems. It is not the purpose of this Article to undertake an exegesis of these interrelated areas or their ramifications. Central consideration, instead, is given to the special legal problems of adultery, illegitimacy, and support and inheritance manifest in any discussion of artificial insemination.

I. THE BACKGROUND OF ARTIFICIAL INSEMINATION: HISTORY, ALTERNATIVES, AND SOME SAFEGUARDS

A. History

Artificial insemination in animals appears to have occurred as early as 1322, when Arab horsemen attempted to breed selectively the mares of their enemies⁸ through a process which would be referred to today as "negative artificial insemination."⁹ The mares were artificially impregnated with the sperm of weak and inferior stallions, thereby introducing an impure breeding strain into the line.¹⁰ An Italian physiologist, Lazzaro Spallanzani, is credited with documenting the first experimental case of artificial insemination when he inseminated a female dog with the semen of a male dog during the eighteenth century.¹¹ The first reported case of artificial

6. See A. SCHELLEN, *ARTIFICIAL INSEMINATION IN THE HUMAN* 6 (1957): "Artificial insemination in its general sense, then, is an attempt to further the chances of and facilitate the encounter between the female germ cells—the ova—and the male seed—the semen—by artificial means." See generally Note, *Child Conceived by A.I.D. Is Illegitimate but Consenting Husband Held Liable for Support*, 64 COLUM. L. REV. 376 (1964); Comment, *Artificial Insemination: A Parvenu Intrudes on Ancient Law*, 58 YALE L.J. 457 (1949).

7. Holloway, *Artificial Insemination: An Examination of the Legal Aspects*, 43 A.B.A.J. 1089 (1957).

8. See W. FINEGOLD, *ARTIFICIAL INSEMINATION* 5 (1964).

9. See text accompanying notes 112-13 *infra*.

10. See Rutherford & Banks, *Semiadoption Techniques and Results*, 5 FERTILITY & STERILITY 271, 272 (1954).

11. See W. FINEGOLD, *ARTIFICIAL INSEMINATION* 6 (1964). See also Holloway, *supra*

insemination of a human being occurred in 1799, when a husband's semen was used to impregnate his wife.¹² A.I.H. occurred more frequently in England after this early success and subsequently spread to France. However, a French tribunal set the foreign judicial tone regarding A.I.H. in 1883. Although mindful that A.I.H. might be less objectionable than A.I.D.—since the husband rather than a donor contributed semen—the tribunal nonetheless condemned the practice as “contrary to the natural law and [a practice] which could constitute a veritable social danger.”¹³

An American researcher recorded successful experimentation with A.I.H. as early as 1866,¹⁴ but he voluntarily abandoned the technique, perhaps worried that it was immoral.¹⁵ Nevertheless, use of A.I.H. and A.I.D. continued to develop during the early part of the twentieth century in the United States; there has been a distinct upward trend in the incidence of both insemination types.¹⁶ In fact, it has been variously estimated that during this century, an average of 1,000-1,200 artificial-insemination children have been conceived in the United States each year.¹⁷

note 7; Rice, *A.I.D.—An Heir of Controversy*, 34 NOTRE DAME LAW. 510 (1959). The exact date of Spallanzani's experimentation is not known, although it must have occurred sometime between 1729-1799, the period of his lifetime. There is some evidence that in the late seventeenth century, a German named Jacobi sprinkled male fish sperm onto the eggs of female fish and successfully fertilized them.

12. See Rice, *supra* note 11, at 511. See also W. GLOVER, *ARTIFICIAL INSEMINATION AMONG HUMAN BEINGS* 4, 5 (1948). This experiment was performed by the English physician, Dr. John Hunter.

13. Rice, *supra* note 11, at 516.

14. Greenhill, *Artificial Insemination: Its Medicolegal Implications*, in SYMPOSIUM ON MEDICOLEGAL PROBLEMS 45 (S. Levinson ed. 1948). Dr. Marion Sims, working at the Women's Hospital in New York, performed fifty-five inseminations on six different patients, with only one successful pregnancy. In an attempt to clarify his reasons for failing to pursue investigations in the area, he stated that he was leaving it to others “who may have the curiosity, leisure, courage and perseverance to experiment further in this direction.” J. FLETCHER, *MORALS AND MEDICINE* 105 (1954).

15. J. FLETCHER, *supra* note 14, at 105. In 1907 a Russian physiologist, E. I. Ivanoff, published the first medical records since the Sim's experiment concerning techniques of artificial insemination in animal husbandry and consequently revived interest in the field. J. FLETCHER, *supra*, at 106.

16. Rice, *supra* note 11, at 511. The author states that A.I.D. was first used in the United States during the first decade of the twentieth century and that there has been a sharp upward trend ever since. But see Folsome, *The Status of Artificial Insemination: A Critical Review*, 45 AM. J. OBSTETRICS & GYNECOLOGY 915 (1943), reporting that A.I.D. was used in the United States as early as the 1890's, but that no upward trend occurred until the 1900's.

17. See Lang, *Artificial Insemination—Legitimate or Illegitimate*, McCALL'S MAGAZINE, May 1955, at 33, 60, where this figure is contrasted with 4,000,000 babies conceived normally each year in the United States. Some authorities claimed that by 1941 over 9,850 American women had experienced pregnancy at least once through artificial means. Of this figure, two thirds had been inseminated by A.I.H. and one third by A.I.D. Other commentators claimed that the figure for women so treated was closer to 38,000. J. FLETCHER, *supra* note 14, at 106.

B. *Alternatives Available to the Childless Couple*

Within a marriage, numerous obstacles may frustrate the natural parental desire to bear children. Among the barriers are sterility, impotence, physiological (genital) impediments, the desire to avoid transmission of inheritable characteristics, and the danger of improperly matched Rh blood factors.¹⁸ Several alternatives are available to couples facing problems of this magnitude. They may accept their fate and resign themselves to what has been described as *barren* love.¹⁹ But because children are viewed as a binding force in a successful marital relationship, this alternative is unacceptable for many. Forced acceptance of a childless union may adversely affect the marriage itself;²⁰ indeed, frustration of social incentives to procreate may dissipate the spirit of *élan vital* essential to a successful marriage. The second alternative is extramarital conception. This solution is not highly regarded because it violates fundamental moral values in society. From the standpoint of the marriage, the practice is objectionable because it would tend to engender guilt feelings on the part of the consenting marital partners. In addition, other, more socially acceptable remedies are available.

Adoption is a socially acceptable and morally sound alternative by which a couple may resolve the problem of a barren marriage. While adoption is a common means by which a man and wife may satisfy their need to have children, however, it does suffer at least one disadvantage. The female, her biological desire to give birth to children unsatisfied, may feel "unfulfilled." This lack of fulfillment may prove detrimental not only to a harmonious mother-child relationship, but also to a complete marital union.

The fourth proposal—and the one of principal consideration here—is artificial insemination. While this procedure satisfies the woman's normal biological desire to bear children,²¹ it raises a host of difficult problems.²² The primary source of legal uncertainty sur-

18. *Id.* at 102.

19. *Id.*

20. E. BURGESS & L. COTTRELL, *PREDICTING SUCCESS OR FAILURE IN MARRIAGE* 261-66 (1939). "Children are seen as a vital factor in American family life. . . . And marital unions where children are [not] present . . . rate in the average very low in marital happiness. . . . Positive attitudes toward having children indicate an increased probability of successful marital adjustment."

For a thoughtful consideration of the attendant moral and religious problems see Symposium, *Morals, Medicine, and the Law*, 31 N.Y.U. L. REV. 1157 (1956).

21. J. FLETCHER, *supra* note 14, at 103, where the author defends artificial insemination by quoting Dr. Frances Seymour: "It is every woman's heritage to bear children."

22. *Id.* at 106. Fletcher contends that legal, social, cultural, religious, emotional, and psychological issues are presented. As previously stated, however, this Article will be confined to a discussion of the legal issues.

rounding the use of A.I.D. is the lack of a direct biological relationship between husband and child. Not only does this disunity of relation result in serious legal problems, but it may also impede comprehensive understanding and acceptance of the process. Moreover, although under normal circumstances the birth of a child may serve as a binding force in a marriage, the birth of an A.I.D. child may accelerate marital discord because the woman is unable to see the image of her husband in the child.²³

C. *Safeguards in the Use of Artificial Insemination*

Certain medical standards are normally adhered to in the administration of artificial insemination. In A.I.D., the donor must be unknown to both the husband and the wife. All parties participating in the procedure—whether A.I.D. or A.I.H.—must freely consent to the process. The doctor who administers artificial insemination must know the couple well, both intellectually and emotionally, and his fees should be minimal in order to reduce mercenary motives. Factors such as the donor's emotional stability and moral acceptance of his act, his health, intelligence, potency, and compatability with the female's blood line are evaluated.²⁴ In addition, the donor must usually be of similar physical proportions to the husband.²⁵ Before the insemination is accomplished, both the donor and the female are carefully examined in order to remove physical hindrances to impregnation, and both are given fertility tests. If the attending physician is satisfied with the results of these examinations, he proceeds to perform the insemination by taking the donor's semen and depositing it in the female's reproductive tract. The end result is a pregnancy unattainable by sexual union between the husband and wife.²⁶

Certain statutory provisions have been enacted in some jurisdictions to ensure the safety of the artificial insemination process. For example, only a licensed medical doctor may legally administer artificial insemination in the City of New York.²⁷ In addition, Board of Health Regulations in that city impose stringent requirements

23. This is certainly not to say that the child itself precipitates the discord. Rather, it is the tendency of each partner, under the daily strains of a marriage, to exaggerate the failings of the other. Whether or not she gives in to it, the wife will always feel the temptation to think of her husband's inability to procreate as a personal failing on his part, and the child will serve as a constant reminder. If this feeling is communicated to the husband his ego may be shattered. In the case of adoption, however, it is quite often never known which party "failed." Failure, if either party thinks of it as such, is a shared experience.

24. W. FINEGOLD, *ARTIFICIAL INSEMINATION* 32 (1964).

25. *Id.* at 33.

26. J. FLETCHER, *supra* note 14, at 109-10.

27. N.Y. [CITY] HEALTH CODE art. 21 (1959) (formerly N.Y. SANITARY CODE § 112).

to prevent infectious disorders, venereal diseases, or blood factor problems from endangering the inseminated female.²⁸ It has even been suggested that a geneticist, as well as a physician, should examine the donor to assure that no genetic or other medical problems will develop.²⁹ Other statutory requirements, however, raise potentially serious legal problems. For instance, the requirement that births be registered poses a dilemma for the physician who has administered A.I.D. because he must state the name of the father on the birth certificate. Ideally, signed papers relative to the insemination should be few, with the child's birth certificate listing the husband of the inseminated female—not the biological donor—as the father.³⁰ Yet, while A.I.D. is intended to be a confidential process in which the donor's identity is not disclosed, the law generally considers the donor or impregnator as the natural father.³¹ Should the physician list the donor as the father, the policy of secrecy will suffer. If the recipient's husband is listed, secrecy will be maintained, but at the cost of a possible charge of perjury against the doctor for falsification of records. The donor, too, is placed in a difficult situation. In addition to the legal problems which may develop from his listing as a father on a birth registration, he may be "plunged into deviate proceedings if his wife (unaware of his donation) becomes aware of his extra-matrimonial sexual activities."³² The dilemma is obvious and thus far unresolved.

While the proponents of artificial insemination premise their

28. The Regulations of the Board of Health of the City of New York have a special section entitled, "Regulations Governing Providing of Semen for Artificial Human Insemination." This section demands that a donor receive a complete physical examination before donation, with special examination of his genital organs. The donor must also take a venereal disease test one week before his semen is obtained. Should an individual be found to be a carrier of venereal disease, tuberculosis, or certain other infectious or transmittable diseases, he will not be allowed to be a donor. In addition, the donor and the recipient must have the same Rh factors. Finally, where artificial insemination is to be effected, the Regulations require that the attending physician record his own name, the donor's name, and the recipient's name and address, the results of the examinations, and the date of the insemination. All such records are maintained in strict confidence and for health purposes only.

29. Hager, *Artificial Insemination: Some Practical Considerations for Effective Counseling*, 39 N.C. L. REV. 217, 228 (1961).

30. Holloway, *supra* note 7, at 1090.

31. J. FLETCHER, *supra* note 14, at 136. See generally *Symposium on Artificial Insemination*, 7 SYRACUSE L. REV. 96 (1955) which raises the question without proposing a feasible solution. As to a doctor's liability for falsifying records, see G. WILLIAMS, *THE SANCTITY OF LIFE AND THE CRIMINAL LAW* 112, 127 (1957).

32. Kardiman, *Artificial Insemination in the Talmud*, 2 HEBREW MED. J. 164, 309 (1950). In Arizona, he may even be held liable for the support of his A.I.D. children. ARIZ. REV. STAT. ANN. § 14-206 (1956) provides that, "Every child is the legitimate child of its natural parents and is entitled to support and education as if born in lawful wedlock."

justification of the process on the fact that A.I.D. strengthens the family unit,³³ some special problems may arise: "The incest taboo is one of the strongest in our society. There can be little doubt that the increasing production of children by means of artificial insemination from unknown donors enhances the possibilities of incestuous marriages and incestuous relationships."³⁴ One commentator demonstrated how this could happen. Suppose that seventeen women were impregnated through the agency of a single donor, himself the father of a large number of intramatrimonial children. "It is by no means an imaginary danger, especially if such a thing takes place in a small town, that twenty-five years later a young man and girl with a common factor marry. . . . Not only may two young people procreated by the semen of an identical donor enter into marriage; the donor might unwittingly marry his own daughter."³⁵

Notwithstanding these basic problems and potentially serious legal consequences, artificial insemination is not an uncommon occurrence. While the desire for secrecy contributes to a lack of precise data as to the extent of the practice, it has been estimated that between 10,000 and 250,000 issue of artificial insemination live in the United States today.³⁶ A.I.D. has, in fact, become so prevalent in this country that it is big business! While in England no compensation is offered to donors, in the United States, donors are encouraged by the view that a donor of semen has the same rights to mandatory payment as a donor of blood.³⁷ Fees range from five to fifty dollars per ejaculation, with an average range of fifteen to twenty-five dollars.³⁸ Physicians, too, are encouraged to administer artificial insemination.³⁹

33. *E.g.*, Comment, *Artificial Insemination: Confusion Compounded*, 3 WAYNE L. REV. 35, 42 (1956).

34. Ploscowe, *The Place of Law in Medico-Moral Problems: A Legal View II*, 31 N.Y.U. L. REV. 1238, 1243 (1956).

35. Kardiman, *supra* note 32, at 258-60. By limiting the number of inseminations in which a given donor may participate, the risk of incest occurring among A.I.D. children would be largely eliminated. See WILLIAMS, *supra* note 31, at 145 (1957). If a donor were to make a knowingly or negligently false representation to a doctor about his background or characteristics, he could be held liable in tort for damages caused by his unrevealed defects. *Glanzer v. Shepard*, 233 N.Y. 236, 135 N.E. 275 (1922).

36. Compare N. ST. JOHN-STEVAS, *LIFE, DEATH, AND THE LAW* 120 (1961) with W. FINEGOLD, *supra* note 14, at 58. See also note 17 *supra*.

37. Kardiman, *supra* note 32, at 164-65.

38. *Id.*

39. The following circular received by many doctors in New York City is illustrative: "We offer semen drawn from healthy and investigated professional donors. Suitable types for your patient's specifications. Active specimens guaranteed and delivered daily. Confidential service—Office hours 5:30 to 7:00 P.M." W. FINEGOLD, *ARTIFICIAL INSEMINATION* 67 (1961).

II. LEGAL PROBLEMS: ILLEGITIMACY, ADULTERY, AND INHERITANCE

Whether a child born as a result of artificial insemination is legitimate depends upon whether his mother's impregnation constituted adultery. If so, the child is considered illegitimate; if not, the offspring's legitimacy cannot be questioned. Thus, adultery and illegitimacy are interrelated issues which go to form a single question: Does a female who consents to artificial insemination commit adultery?

Historically, adultery has been condemned by the law because *inter alia* it tends to introduce spurious heirs into a family, adulterating the issue of an innocent husband and diverting the inheritance away from his own bloodline to that of a stranger.⁴⁰ More recently, courts have stated that a necessary prerequisite to adultery is a physical act which includes penetration of a female by a male.⁴¹ Most jurisdictions concur in this reasoning and state that sexual intercourse is a necessary element for adultery.⁴² Accordingly, it would appear that artificial insemination should not constitute adultery since there is no sexual act of penetration. However, this is not the case. While only a few reported decisions deal with this question, the cases—with two notable exceptions—conclude that artificial insemination is adulterous and that the offspring resulting from it are illegitimate. It is apparently assumed that since the impregnated female's husband played no physical part in the birth of a child conceived by A.I.D., his wife committed adultery.⁴³ Even though the husband consented to A.I.D., he may later claim the insemination

40. See, e.g., *State v. Roberts*, 169 Wis. 570, 173 N.W. 310 (1919); *State v. Hasty*, 121 Iowa 507, 96 N.W. 1115 (1903).

41. Note, *Social and Legal Aspects of Human Artificial Insemination*, 1965 Wis. L. REV. 859, states this rule, noting New York and Michigan authorities. The author contends that if penetration is, in fact, the sole criterion of adultery, then artificial insemination by a donor cannot be held to constitute adultery. Obviously, artificial insemination by a husband using A.I.H. cannot be adulterous.

The NEW YORK PENAL LAW § 255.17 (McKinney 1964) states simply that "[a] person is guilty of adultery when he engages in sexual intercourse with another person at a time when he has a living spouse, or the other person has a living spouse." [Sexual intercourse is defined as "carnal copulation of male and female, implying actual penetration of the organs of the latter." BLACK'S LAW DICTIONARY 1541 (4th ed. 1957).] In New York a plaintiff is not entitled to a divorce, even though adultery is established, where the offense was committed either by the procurement or with the connivance of the plaintiff, or where the offense has been forgiven by the plaintiff. N.Y. DOM. REL. LAW § 171 (McKinney 1964).

42. In addition to the New York and Michigan authorities mentioned in Note, *supra* note 41, see *Warner v. State*, 202 Ind. 479, 175 N.E. 661 (1931); *Commonwealth v. Moon*, 151 Pa. Super. 555, 30 A.2d 704 (1943).

43. Ploscowe, *supra* note 34, at 1242.

as a basis for divorce.⁴⁴ Moreover, his consent would not even negate the wife's criminal act of adultery.⁴⁵

An Ontario court, faced with the case of a woman who had agreed to A.I.D. without her husband's consent, held in *Orford v. Orford*⁴⁶ that her action constituted adultery. The court added a lengthy dictum which, although contrary to the basic theory of adultery,⁴⁷ has proved to be the basis for many subsequent artificial insemination decisions. The opinion stated that the gravamen of adultery lies not so much in "the moral turpitude of the act of sexual intercourse" as in "the voluntary surrender to another person of the reproductive powers or faculties of the guilty person" Moreover,

any submission of these powers to the service or enjoyment of any person other than the husband or the wife comes within the definition of "adultery."

*. . . Sexual intercourse is adulterous because in the case of the woman it involves the possibility of introducing into the family of the husband a false strain of blood. Any act on the part of the wife which does that would, therefore, be adulterous.*⁴⁸

This definition is significant because it shifts the essence of adultery from the sexual act of penetration to *any* act which might introduce a false strain of blood into the family of the husband.

The English case of *L. v. L.*⁴⁹ went a step further. There a couple married, but their marriage was never consummated. They tried A.I.H. for one year, and, both believing that no success had been achieved, they separated. In fact, the woman was pregnant as a result of homologous insemination and bore a child. Since A.I.H. had been used, there could be no question of adultery. Yet, the English court concluded that the child was not the result of a normal sexual consummation and was, therefore, illegitimate.⁵⁰

The first American case on the subject of A.I.D. found that this procedure, even without the husband's consent, was not adulterous.⁵¹ However, the case was not officially reported and has never

44. Hager, *supra* note 29, at 233.

45. *Id.* at 232.

46. 49 Ont. L.R. 15, 58 D.L.R. 251 (1921).

47. See notes 41 & 42 *supra* and accompanying text.

48. 49 Ont. L.R. at 22-23, 58 D.L.R. at 258 (emphasis added).

49. 1 All E.R. 141 (1949).

50. 1 All E.R. 141. An English statute, 14 Geo. VI c. 25, s. 9 (1951), later abrogated the effect of this decision by providing that any child who would have been legitimate had his parents' marriage been dissolved by divorce is legitimate even though the marriage was annulled. For further explanation, see Rice, *supra* note 11.

51. Hoch v. Hoch, *TIME*, Feb. 26, 1945, at 58.

been followed. Interestingly, the view expressed in this early decision did not die a complete death, for in 1948 a New York lower court followed a similar rationale in *Strand v. Strand*.⁵² The court held that a husband's parental rights concerning his A.I.D. children are akin to those of an adopting foster father; thus, the children were legitimate. While proponents of artificial insemination may have found solace in this view, the *Strand* theory was an exception to the traditional view, and the *Orford* reasoning continued to prevail. Thus, in 1954, an Illinois trial court followed the *Orford* rationale even though the husband of the woman receiving A.I.D. had consented to using the practice. The court held in *Doornbos v. Doornbos*⁵³ that the use of A.I.D. constituted adultery even when the husband had consented, and that a child born as a result of this process was illegitimate.⁵⁴

In 1963, a New York State supreme court judge was faced with a familiar factual setting: husband and wife had consented to the administration of A.I.D. and the wife later sued for divorce, praying for support of the resulting child. The judge ruled that a child born to a married woman through a father not the woman's husband is illegitimate and that the wife's act constituted adultery, notwithstanding the husband's consent.⁵⁵ However, the husband's consent did make him liable for the child's support on an implied contract theory, and he was equitably estopped from denying his obligation.⁵⁶

52. 190 Misc. 786, 78 N.Y.S.2d 390 (Sup. Ct. 1948). It should be noted, however, that in *Strand*, the court was confronted with separation proceedings involving custody of a child conceived by means of artificial insemination. The defendant-husband had consented to his wife's artificial insemination, and the court found the defendant entitled to the same rights of visitation as those acquired by foster parents—arguing that, in essence, the defendant had adopted the child in question.

See also *People ex rel. Abajian v. Dennett*, 15 Misc. 2d 260, 184 N.Y.S.2d 178 (Sup. Ct. 1958), where it was held that a Nevada divorce decree was entitled to full faith and credit in New York and that the wife was estopped from claiming for the first time that her children were born as a result of artificial insemination, thereby attempting to prevent her former husband from enforcing his visitation rights.

53. 23 U.S.L.W. 2308 (Super. Ct. Cook County, Ill., Dec. 13, 1954).

54. The Court further stated that a child so conceived is the legal child of the mother only, and that her husband has no right or interest in the child. An appeal of this case to the Illinois appellate court was dismissed without reference to the principal question. 12 Ill. App. 2d 473 (1956).

55. *Gursky v. Gursky*, 39 Misc. 2d 1083, 242 N.Y.S.2d 406 (Sup. Ct. 1963). The court stated that this was a proper subject for legislative action and that since no statutory action had been taken to legitimize A.I.D. children, the court was unwilling to take the initiative.

56. 39 Misc. 2d at 1089, 242 N.Y.S.2d at 412. See also C. BOARDMAN, NEW YORK FAMILY LAW § 116 (Biskind ed. 1966):

When—as in *Gursky*—a husband consents to the artificial insemination of his wife because of his own physical or psychological inadequacies but permits his name to be listed on the birth certificate as the father, it would seem that a pre-

In March 1967, a divorced woman's former husband was charged with nonsupport of their A.I.D. son in the nation's first A.I.D. criminal case, *People v. Sorensen*.⁵⁷ The defendant had consented, after fifteen years of marriage and a medical determination of his sterility, to allow his wife to be artificially inseminated. He and his wife executed an agreement to that effect with a local physician, and A.I.D. was administered. When a child was born as a result of this process, the mother named the defendant as the father on the child's birth certificate. For approximately four years prior to their separation, the couple experienced a normal family relationship—with the defendant representing to his friends that he was the child's father. Upon separation, Mrs. Sorensen told the defendant that she wanted no support for the child. A divorce was subsequently granted, but the court retained jurisdiction on the issue of support for the minor child. When Mrs. Sorensen's illness necessitated public assistance under the state's aid-to-needy-children program, the district attorney instituted a criminal action alleging the defendant's guilt under section 270 of the California Penal Code for failure to support the child. A California municipal court judge found the defendant guilty of the misdemeanor charge, relying upon the public policy that "all children born in wedlock are presumed legitimate issue of

sumption of legitimacy, born of the recognition that it is necessary to remove from children the stigma of illegitimacy, should operate as an estoppel against both a wife and husband contravening or contradicting this parenthood.

In *Anonymous v. Anonymous*, 41 Misc. 2d 886, 246 N.Y.S.2d 835 (Sup. Ct. 1964), a wife sought temporary alimony and attorneys' fees from her husband in a divorce action. Although the husband had signed a written agreement consenting to his wife's artificial insemination he nonetheless maintained that the children so conceived were illegitimate. The court ordered alimony and noted that the husband's written consent for his wife to undergo artificial insemination implied a promise on his part to furnish support for any offspring resulting from the insemination. Although the court did not specifically so state, an inference can be drawn that the children involved in this action were to be deemed legitimate.

On May 13, 1967, Mrs. Kate Prutting was granted a separation which included a trust fund set up by the husband for their artificially inseminated child. A jury of the New York supreme court concluded that the defendant husband was sterile at the time his wife became pregnant and that he did consent to her artificial insemination. Notwithstanding these findings, justice Emilio Nunez did not have to decide on the legality of artificial insemination in this case. During the trial, the parties entered into a stipulation settling all the issues between them, leaving to the court only the issue of whether there was a proper basis for a legal separation. In the stipulation, the husband admitted that the child was the lawful issue of the marriage. Thus, the court had no reason to consider this question, and merely granted a separation accepting the child's legitimacy as admitted by the defendant. Regrettably, although this action attained wide publicity, *Prutting* represented no advance in judicial thinking on the subject of artificial insemination. No opinion was rendered by Justice Emilio Nunez. See statement of facts and letter from justice Nunez dated May 23, 1967, on file with the *Michigan Law Review*.

57. 62 Cal. Rptr. 462 (1967).

the marital partners."⁵⁸ Thus, the wife's act was not adulterous, the child was legitimate, and the husband was obligated to support the child or face criminal charges. Shortly after the decision *Time* magazine commented that "[w]hether such a conviction would stand up in a higher court is open to question."⁵⁹ This doubt proved to be warranted, for a California court of appeals subsequently reversed the lower court conviction,⁶⁰ thereby temporarily destroying another opportunity to supply a more realistic judicial appraisal of artificial insemination.

However, this intermediate court decision was vacated by the California Supreme Court and a new, forward-looking concept was substituted which complemented and amplified the municipal court's original holding.⁶¹ A unanimous court held that the defendant was the lawful father of the child born to his former wife, that the child was conceived by artificial insemination to which the defendant had consented, and that his conduct carried with it an obligation of support within the meaning of section 270 of the Penal Code.⁶² The court went on to say that the term "father" must be broadly construed; that it should not—for the purposes of this particular statute—be limited to the biological or natural father as those terms are generally understood, but rather tied to an evaluation of whether the legal relationship of father and child exists.⁶³ Paternity, then, is established beyond a reasonable doubt when it is shown that a husband—unable to accomplish his parental objective of creating a child—purchases semen from a donor and proceeds to use it to inseminate his wife:⁶⁴

Categorizing the child as either legitimate or illegitimate does not resolve the issue of the legal consequences flowing from defendant's participation in the child's existence. Under our statute, both legiti-

58. *TIME*, April 14, 1967, at 79-80.

59. *Id.* at 80.

60. 62 Cal. Rptr. 462 (1967). The court relied in part on *Gursky v. Gursky*, 39 Misc. 2d 1083, 242 N.Y.S.2d 178 (Sup. Ct. 1963) and carefully distinguished *Strand v. Strand*, discussed *supra* note 52 and accompanying text, on the ground that "[t]he court [in *Strand*] carefully abstained from passing on the legal consequences insofar as property rights are concerned." The *Sorensen* court stated that "the People may not rely on estoppel of the accused in order to prove an essential element of the crime of which he is accused." 62 Cal. Rptr. at 466. Thus, the state was not allowed to show that the defendant was the father of the child by estopping him from disputing this fact.

61. *People v. Sorensen*, 437 P.2d 495, 66 Cal. Rptr. 7 (1968).

62. 437 P.2d at 498, 66 Cal. Rptr. at 10 (1968). The Court also stated that if a child is born either during the existence of a marriage or within 300 days after its dissolution, the child is presumed to be a legitimate child of that marriage. 437 P.2d at 497, 66 Cal. Rptr. at 9.

63. 437 P.2d at 498, 66 Cal. Rptr. at 10.

64. 437 P.2d at 499-500, 66 Cal. Rptr. at 11-12.

mate and illegitimate minors have a right to support from their parents.⁶⁵

From a public policy point of view, the court noted that society should be spared the burden of supporting children who have parents able to care for them. Moreover, children should not be socially stigmatized for an act over which they had no control.⁶⁶

In answer to the classic argument that acts of A.I.D. are adulterous as to the doctor, wife, and donor, the court concluded: "Since the doctor may be a woman, or the husband himself may administer the insemination by a syringe this is patently absurd; to consider it an act of adultery with the donor who at the time of insemination may be a thousand miles away or may even be dead is equally absurd."⁶⁷ In applying this reasoning, the California Supreme Court introduced a sorely needed element of sophistication into judicial consideration of this complex area of domestic relations. But, while *Sorensen* is a bold judicial step, it is tied to a single provision in a *particular* state statute. Whether the California Supreme Court would apply the same reasoning in another case under a different statute is questionable; the court emphasized in *Sorensen* that it was merely construing section 270 of the California Penal Code and that broad questions of legitimacy and succession must be answered by the legislature.⁶⁸ However, it may be hoped that the basic principle enunciated in *Sorensen*—that "no valid public purpose is served by stigmatizing an artificially conceived child as illegitimate"⁶⁹—will be persuasive not only for the California court in other cases, but for other state courts as well.

It is anomalous for a court to consider artificial insemination within the existing common-law framework of adultery and illegitimacy. There are admitted dangers associated with artificial insemination, but they are of a qualitatively different nature than the problems associated with adultery.⁷⁰

[A]dultery is committed for sexual gratification, which is acquired by the physical contact between male and female and by the consummation of the act itself. Not only is this physical gratification absent in A.I.D. but the donor and recipient never consciously lay eyes upon one another.⁷¹

65. 437 P.2d at 501, 66 Cal. Rptr. at 13.

66. 437 P.2d at 501, 66 Cal. Rptr. at 13.

67. 437 P.2d at 501, 66 Cal. Rptr. at 13.

68. 437 P.2d at 501, 66 Cal. Rptr. at 13.

69. 437 P.2d at 501, 66 Cal. Rptr. at 13.

70. See Rice, *A.I.D.—An Heir of Controversy*, 34 NOTRE DAME LAW. 510, 515 (1959).

71. C. BOARDMAN, *supra* note 56, at 483-84.

It should be remembered that adultery, as defined in recent court decisions, presupposes sexual intercourse.⁷² *Sexual* intercourse is not, by any stretch of the imagination, integral to artificial insemination. There is an obvious difference between A.I.D. and the clandestine physical relationships which usually accompany adultery. In addition, the law of adultery attempts to inject certain commonly held moral values into the legal system; this approach, however, is not applicable to artificial insemination since the moral turpitude incident to an illicit sexual affair is simply not present. A wife is not being unfaithful to her spouse by attempting artificial impregnation; rather, she is bolstering another commonly held moral value—the stability of the family unit. Moreover, the woman's husband is usually in sympathy with this action and wishes to stand in loco parentis to the offspring.⁷³

The New York City Family Law seeks to avoid the rule of "automatic adultery" with respect to artificial insemination⁷⁴ by defining an illegitimate child as one born out of wedlock,⁷⁵ and invoking a strong presumption of legitimacy which may be overcome only by clear and convincing proof⁷⁶ of the husband's sterility, infertility, or impotence.⁷⁷ The presumption of a child's legitimacy is grounded in the English common-law concept that an offspring is deemed legitimate unless it can be shown that the husband either had no access to his wife or was impotent. If it can be

conclusively proven that the wife lived in open adultery from the normal 280-day period of gestation and from an additional long period before and after, and that the child's birth was registered by the mother and her paramour as theirs, nevertheless, if for one scant fraction of a day at approximately the calculated time of conception the husband had access to the wife, then the child is unquestionably legitimate.⁷⁸

This theory has been echoed in the United States in a few instances, despite this country's strict views regarding legitimacy.⁷⁹ For in-

72. See notes 40-47 *supra* and accompanying text.

73. See, e.g., *State v. Taylor*, 125 Kan. 594, 264 P. 1069 (1928); *Wicoff v. Moore*, 257 S.W. 474 (Mo. 1924); *Syzchk v. Szczerbaniewicz*, 233 App. Div. 342, 252 N.Y.S. 780 (1931).

74. See generally C. BOARDMAN, *supra* note 56.

75. N.Y. FAMILY CT. ACT § 512.

76. See C. BOARDMAN, *supra* note 56, § 117.

77. *Id.* at § 115.02. To overcome this presumption, evidence must be adduced relating to the time at which conception would or could have taken place. *Houston v. Houston*, 199 Misc. 469, 99 N.Y.S.2d 199 (Fam. Ct. Queens Cty. 1950).

78. Weinberger, *A Partial Solution to Legitimacy Problems Arising from the Use of Artificial Insemination*, 35 IND. L.J. 143, 153 (1960).

79. *Id.*

stance, while Benjamin Cardozo was Chief Judge of the New York Court of Appeals, he wrote:

If husband and wife are living together in the conjugal relation, legitimacy will be presumed, though the wife has harbored an adulterer It may even be presumed though the spouses are living apart if there is a fair basis for the belief that at times they may have come together.⁸⁰

This kind of presumption indicates a more logical and flexible attitude toward legitimacy and adultery, and is preferable to the reasoning of the *Orford* and *Doornbos* cases. However, the mere adoption of a liberal presumption does not remove artificial insemination from the context of present adultery and legitimacy laws. Yet, since artificial insemination is neither illicit nor immoral, and since sexual penetration—the necessary prerequisite to adultery—is absent, it is anomalous to consider the process as anything but an attempt to compensate for an unfortunate physical obstacle to complete matrimonial union.

A related legal issue is whether artificial-insemination babies should be allowed to inherit from their biological fathers. The Rule Against Perpetuities⁸¹ figures prominently in this discussion. Assume the following no longer implausible situation: An astronaut makes bequests "to such of my grandchildren as shall reach the age of twenty-one." These bequests appear to be valid under the Rule Against Perpetuities since the lives in being are those of the testator's children, and the grandchildren must reach twenty-one within twenty-one years after the children's lives. However, under certain special circumstances these bequests may be invalid. Suppose the astronaut, fearing radiations in space which might lead to mutations, deposited specimens of his sperm in a sperm bank to be refrigerated and preserved indefinitely. Assume further that the astronaut dies in space two years later and that his widow feels the "genetic responsibility" to continue his bloodline by becoming artificially impregnated with his frozen sperm.⁸² Now the problem is more difficult to reconcile with the Rule Against Perpetuities since

80. *In re Findlay*, 253 N.Y. 1, 8, 170 N.E. 471, 473 (1930). See also *Segure v. Culley*, 329 Ill. 458, 160 N.E. 847 (1928); *Moore's Case*, 294 Mass. 577, 3 N.E.2d 5 (1936); J. WIGMORE, EVIDENCE § 2527 (3d ed. 1940).

81. "No interest is good unless it must vest, if at all, not later than twenty-one years after some life in being at the creation of the interest." Leach, *Perpetuities in a Nutshell*, 51 HARV. L. REV. 638, 639 (1938).

82. Leach, *Perpetuities in the Atomic Age: The Sperm Bank and the Fertile Decedent*, 48 A.B.A.J. 942, 943, n.3 (1962). See also Leach, *Perpetuities: The Nutshell Revisited*, 78 HARV. L. REV. 973, 979 (1965).

no interest vests within twenty-one years of a life in being. The question is whether the Rule bars the astronaut's grandchild from taking.

Professor W. Barton Leach has anticipated this problem and has written the following draft opinion for any court faced with such a question:

We hold that a posthumously conceived sperm bank child of the donor's widow is the legitimate child of her and her late husband, at least if she has not remarried at the time of conception. We also hold that the duration of a male "life in being" under the Rule against Perpetuities should be defined as the period of his reproductive capacity, including any post-mortem period during which the sperm remains fertile.⁸³

To assure that this opinion has sustaining value and is accepted by legislative bodies, Professor Leach advocates special accompanying legislation:

Any interest in real or personal property which would violate the rule against perpetuities shall be reformed, within the limits of that rule, to approximate most closely the intention of the creator of the interest. In determining whether an interest would violate said rule and in reforming an interest the period of perpetuities shall be measured by actual rather than possible events, provided that the measuring lives must have a causal relationship to the vesting or failure of the interest.⁸⁴

Professor Leach's position is strong. The Rule Against Perpetuities was originally intended to prevent interests which vest too remotely from taking effect; it obviously did not contemplate the existence of sperm banks.⁸⁵ Sperm banks are neither used to forestall the vesting of interests nor designed to postpone the taking of assets. Rather, the banks are utilized to enable males who may be unable to reproduce at a later time to participate in the reproduction process. This purpose is not contrary to the policy of the Rule Against Perpetuities.

83. Leach, *Perpetuities in the Atomic Age: The Sperm Bank and the Fertile Decedent*, 48 A.B.A.J. at 944.

84. *Id.* Vermont has passed a statute similar to the proposed statute. VT. STAT. ANN., tit. 27, § 501 (1959) states:

Any interest in real or personal property which would violate the rule against perpetuities shall be reformed, within the limits of that rule, to approximate most closely the intention of the creator of the interest. In determining whether an interest would violate said rule and in reforming an interest the period of perpetuities shall be measured by actual rather than possible events.

85. Leach, *supra* note 81, at 639. See also Lynn, *Raising the Perpetuities Question: Conception, Adoption, "Wait and See," and Cy Pres*, 17 VAND. L. REV. 1391 (1964).

III. STATE LEGISLATION

Some state legislatures have been sensitive enough to the legal problems raised by artificial insemination to attempt the passage of legislation which would legalize its use. Unfortunately, all of these legislative proposals—save one, by implication—have failed.⁸⁶ As matters stand, therefore, there are no statutory provisions which fully explain the rights and duties of the parties affected, each of whom requires a measure of legal protection.⁸⁷ For example, the proposed New York statute (rejected by the state legislature in 1949) provided that a child born as a result of artificial insemination with the consent of the husband would be considered legitimate for all purposes, including inheritance. The proposal also purported to govern the method of filing consent and to secure a measure of privacy for the consenting partners.⁸⁸ Although this bill, with others of similar intent, represented an intelligent and significant step in the right direction, it still left much to be desired. It failed to define either the status of a child conceived without the husband's consent, or the liabilities of doctor, donor, and wife.⁸⁹ The State of New York has since taken no further steps toward the passage of artificial-insemination legislation. However, New York City has enacted an ordinance prescribing a medical examination of

86. See, e.g., Indiana House Bill 350 (1949); N.Y. Senate Bill 493 (1951); N.Y. Senate Bill 579 (1950); N.Y. Senate Bill 778 (1949); N.Y. Senate Bill 745 (1948); Virginia Senate Bill 199 (1948); Wisconsin Assembly Bill 407 (1949). All of these bills were intended to legitimize an A.I.D. child born with the consent of the impregnated woman's husband, but all were defeated. See generally Note, *Legislative Approach to Artificial Insemination*, 53 CORNELL L. REV. 497 (1968).

87. W. FINEGOLD, *ARTIFICIAL INSEMINATION* 63 (1964). According to Finegold, the parties affected are the patient, the husband, the donor, the attending physician, and the resultant offspring; each of these should know his legal rights and responsibilities.

88. N.Y. Senate Bill 801, 172d Sess. (1949):

1. A child born to a married woman by means of artificial insemination with the consent of her husband shall be deemed the legitimate, natural child of both the husband and his wife for all purposes, and such husband and wife and such child shall sustain toward each other the legal relation of parent and child and shall have all the rights and be subject to all the duties of that relationship including the rights of inheritance from each other.

2. The consent of the husband . . . is one which is in writing . . . and duly filed in the office of the clerk of the county in which such husband and wife reside. Each such consent so filed shall be sealed by the clerk's office and shall not be subject to inspection . . . except pursuant to an order of a court of competent jurisdiction.

89. Note, *Legal and Social Implications of Artificial Insemination*, 34 IOWA L. REV. 658 (1949). A less comprehensive bill, filed in the Virginia Legislature, Virginia Bill S. 745, Gen. Sess. (1948), provided that "[c]hildren born as the result of artificial insemination shall be considered the same as legitimate children for all purposes, if the husband of the mother consented to the operation." This statute is subject to the same criticisms as the New York Bill.

donors and requiring the maintenance of certain records.⁹⁰ This ordinance, while conveying tacit approval of A.I.D., has not been interpreted as explicitly legalizing the process. Thus, neither legislative bodies nor courts have proved willing to take a bold step forward.

On May 12, 1967, the Oklahoma legislature became the first state legislature to take a definite stand on the question of artificial insemination⁹¹ by passing a statute authorizing the use of A.I.D. within the state and providing for the legitimacy of children born as a result of the consensual use of this process. The statute specifies that A.I.D. may be administered only by a licensed physician upon the request and written consent of a husband and wife desirous of having children.⁹² While this statute is no panacea, it will go far toward clarifying problem areas never before aggressively explored in a concrete manner. It may be argued that a broad construction of the statute directly legalizes heterologous artificial insemination. The child who is born as a consequence of artificial insemination is to be regarded as "a naturally conceived legitimate child of the husband and wife," thus implying that the child will share in the normal inheritance rights of his family.⁹³ Moreover, the statute provides for the confidentiality of A.I.D. records in order to assure the parties the needed protection of privacy. This latter provision, by itself, might go far toward promoting wider experimentation with A.I.D. The inseminated wife would appear to be protected against subsequent allegations of adultery raised by her consenting husband, but where consent is not given, no protection is afforded. This is as it should be. Homologous insemination and

90. N.Y. [CITY] HEALTH CODE art. 21 (1959) (formerly N.Y. SANITARY CODE § 112). See note 28 *supra*.

91. See letter from Mr. Victor J. Holper, Vice-President and Editor-in-Chief of West Publishing Co., dated June 2, 1967, on file with the *Michigan Law Review*.

92. OKLA. STAT. ANN. tit. 10, §§ 551-53 (Supp. 1967):

Section 1. The technique of heterologous artificial insemination (A.I.D.) may be performed in this State by persons duly authorized to practice medicine at the request and with the consent in writing of the husband and wife desiring the utilization of such technique for the purpose of conceiving a child or children.

Section 2. Any child or children born as the result thereof shall be considered at Law in all respects the same as a naturally conceived legitimate child of the husband and wife so requesting and consenting to the use of such technique.

Section 3. No person shall perform the technique of heterologous artificial insemination unless currently licensed to practice medicine in this State, and then only at the request and with the written consent of the husband and wife desiring the utilization of such technique. The said consent shall be executed and acknowledged by both the husband and wife and the person who is to perform the technique, and the judge having jurisdiction over adoption of children, and an original thereof shall be filed under the same.

93. If a child is found to be illegitimate because the husband did not consent to his wife's artificial insemination, it might be argued that the child has a right—co-extensive with other illegitimate children—to share in his natural father's estate.

heterologous insemination, *when the husband consents*, should be legalized. The claim that A.I.D. is immoral rests upon the theory that a marriage is a sexual monopoly and that parenthood is a physiological partnership only.⁹⁴ These views are simply inconsistent with a couple's sincere wish to have children with the aid of a donor's semen when it would otherwise be impossible. Where a husband does not consent to the use of A.I.D., on the other hand, the practice should not be legally recognized. The basis for legality is the preservation of a family unit and acknowledgement of a married couple's right to have children. Where only one partner in a marriage consents, it would be unfortunate to allow a child to be born. The family *unit*, as such, might never be preserved if one member of the family has serious misgivings about the very propriety of its existence. Therefore, the same policy reasons which justify A.I.H. and A.I.D. with the husband's consent militate against the legality of A.I.D. without the husband's consent.

The public policy which dictates legalization of these forms of artificial insemination also demands that the choice of having children be left primarily to the marriage partners themselves. No governing body or family counseling unit should have the authority to force children on unwilling parents. Just as *Griswold v. Connecticut*⁹⁵ upheld the right of a married couple to prevent birth if they so choose, artificial insemination laws should allow the couple absolute discretion to determine whether or not they desire children. Because of these considerations, the requirement that both marriage partners freely and voluntarily consent to artificial insemination should not generally be waived.

IV. UNCONVENTIONAL APPLICATIONS: SPERM BANKS AND EUGENICS

It has been said that "[i]n a fundamental way, Man is again where he was 20,000 years ago: at the precipice of total extinction."⁹⁶ This dilemma has led physicists, authors, and physicians to advocate the development of "sperm banks" in which human sperm would be refrigerated so that it would be available to inseminate females artificially.⁹⁷ The theory behind this suggestion centers more

94. J. FLETCHER, *MORALS AND MEDICINE* 139 (1954).

95. 381 U.S. 479 (1965). The Supreme Court struck down a state statute prohibiting the use of contraceptives as an unconstitutional invasion of the right of privacy of married persons. The Court concluded that a policy which authorized searches of marital bedrooms for "tell tale signs" of contraceptives was repulsive to notions of privacy inherent in every marriage.

96. 1 *UNIVERSITY REVIEW* 19 (1967) quoting Toynbee, *History in the Image of Man*.

97. The process requires that concentrated semen be treated with glycerol and then frozen. 66 *SCIENCE NEWS LETTER* 402 (1954). There are two freezing techniques: one

on the preservation of the population and the survival of the human race than it does on strengthening marital relationships by satisfying parental desires to bear children. The ultimate purpose of a sperm bank is to assure the survival of society, even if there is an insufficient number of acceptable male members to allow normal reproduction.⁹⁸ At the other extreme, sperm banks could play an important role—along with birth control techniques—in controlling world overpopulation.⁹⁹ These banks could serve the dual function of discouraging high birth rates in the short term while insuring against extinction in the future.

Sperm banks could also serve certain other practical functions. Scientists and members of the armed forces are frequently subjected to vast amounts of radiation in the performance of their duties, and many civilians require radiation therapy for the treatment of disease. Yet medical science has shown that subjecting the human body to radiation may induce mutations or have adverse effects upon one's reproductive capacity.¹⁰⁰ With the use of sperm banks, a person about to be exposed to radiation could donate his sperm to be used at a later time to impregnate his wife, thus assuring the conception of a child within *their* marriage. Such a person could also become an A.I.D. donor. Men with few or weak sperm and men about to undergo surgery which might destroy their reproductive capacity would be able to procreate through the use of these banks.¹⁰¹

Sperm banks have proved to be rather successful in practice. In the first experiment with such a bank at the State University of Iowa, three normal babies, a boy and two girls, were born.¹⁰² Dr. S. J. Behr, Director of the Center for Research in Reproductive Biology of the Michigan Society of Obstetricians and Gynecologists, recently reported that seventeen healthy, normal children were born of women impregnated with human sperm frozen for as long as two and one half years.¹⁰³ The success of these and other experiments may be attributed to the development of techniques for the proper

employing liquid nitrogen and the other dry ice. One expert reported 40% success with liquid-nitrogen freezing as against 16% success with dry-ice freezing. See Wray-McCann, *Fatherhood in Deep Freeze*, 60 SCIENCE DIGEST 12 (1966).

98. The use of sperm banks presupposes that the requesting female can be matched with a donor who has the proper Rh factor and other compatible characteristics.

99. N.Y. Times, Aug. 29, 1961, at 26, col. 1.

100. *Id.*

101. Wray-McCann, *supra* note 97.

102. 66 SCIENCE NEWS LETTER 402 (1954).

103. Wray-McCann, *supra* note 97. The authors also cite a three-year survey in which one hundred fourteen insemination injections resulted in twenty-eight pregnancies, all but one of which were normal.

preservation of the sperm. A liquid-nitrogen freezing process has proved to be most successful.¹⁰⁴ A team of scientists at the Albert Einstein Medical Center in Philadelphia observed four babies, ranging in age from five to eleven months, developing normally both physically and mentally, although fathered by frozen sperm.¹⁰⁵ The doctor in charge reported that ". . . fresh human spermatozoa [were] preserved up to five and a half months by freezing at -321°F in liquid nitrogen. After thawing, there was no significant change in the sperm count."¹⁰⁶

The concept of eugenics has been urged as a way to improve the human race by controlling breeding.¹⁰⁷ It is premised on the assumption that the highly endowed have a genetic duty to bear large families in order to perpetuate a "better man."¹⁰⁸ The eugenics proposal, as championed in recent years by the late Professor Herman J. Muller,¹⁰⁹ was distorted in the 1930's by Adolf Hitler, and world opinion quickly turned against it.¹¹⁰ Adverse opinion was and is presently due to the eugenicists' basic assumption—that the higher socioeconomic, cultured, and intellectual classes must keep humanity from sinking "into a universal slum."¹¹¹ The theory contains elements of both "positive eugenics" and "negative eugenics."¹¹² The former concept encourages those considered fit and proper to reproduce more children; for instance, "unfit" women would receive A.I.D. semen from exceptional male donors,¹¹³ thus enhancing the lot of the resultant offspring. The latter concept seeks to increase the death rate of those carrying "unfit" genes by encouraging the less fit and those with inheritable diseases to remain childless. The ultimate goal of eugenicists is to assure eutelegensis, that is, mass insemination using superior human sperm, through wholesale application of positive eugenics.

104. See note 97 *supra*.

105. 85 SCIENCE NEWS LETTER 374 (1964).

106. *Id.*

107. Frisch, *Science's Toughest Subject*, 54 SCIENCE DIGEST 34 (1963). *Eugenics* is defined as "a science that deals with the improvement of hereditary qualities in a series of generations of a race or breed especially by social control of human mating and reproduction—race improvement." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY UNABRIDGED 783 (1967). *Genetics* is defined as "relating to or determined by the origin, development, prior history, or causal antecedents of some phenomenon . . . based on or determined by evolution from a common source." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY UNABRIDGED 946 (1967).

108. Muller, *Human Evolution by Voluntary Choice of Germ Plasm*, 134 SCIENCE 643 (1961).

109. See, e.g., Frisch, *supra* note 107; Muller, *supra* note 108.

110. Frisch, *supra* note 107, at 35.

111. N.Y. Times, Aug. 29, 1961, at 26, col. 1.

112. Frisch, *supra* note 107, at 36-37.

113. *Id.* at 37.

Eugenics, if properly controlled as a scientific experiment, has merit.¹¹⁴ Regrettably, it is all too often the subject of science-fiction novels, movies, and television dramas which tend to distort the positive effects of its study and application. While some horrified critics point to Hitler's experimentation and say, "Never again!" other more sophisticated observers acknowledge Hitler's psychological imbalance and note that, when pursued on a scientifically mature level, eugenics offers to future generations freedom from disease, longer, more productive lives, and more advanced levels of intellectual understanding. At the present time, eugenics is discussed only at a theoretical level; but practical applications will begin to emerge, and their direction may well determine the future of the entire human race. Not the least of the problems which must be solved before practical application of eugenics will be feasible is the ethical one of determining which human characteristics are worthy of preservation,¹¹⁵ by what criteria this will be ascertained, and who is to make the crucial decisions.

The use of A.I.D. to accomplish positive eugenics is at best a novel approach with broad implications for the future but little

114. It is generally acknowledged that chromosomes determine all physical characteristics and control body chemistry. Some geneticists believe that certain chromosomal disorders (XYY sex chromosomes) may mark an individual at birth as particularly prone to violence and antisocial behavior. *NEWSWEEK*, May 6, 1968, at 87. Louis Nizer is quoted as saying: "It isn't enough to have a genetic or chemical defense of this type because Anglo-Saxon law never considered aggressive tendencies as grounds for a defense." He continued by noting that, "[t]he central question is whether the defendant is able to tell the difference between right and wrong. I think a genetic abnormality might only be used if it were the basis for a plea of insanity."

Melvin Belli would not disregard "the use of an XYY abnormality as a defense, but it still must be shown that the defendant is either insane or doesn't know the difference between right and wrong."

In a recent Austrian murder trial, a defendant with a chromosomal imbalance was acquitted, while on October 13, 1968, a Frenchman with the XYY chromosome condition was convicted despite a strong defense which included supporting testimony by two prominent French medical authorities. Lloyd Garrison, *French Murder Jury Rejects Chromosome Defect as Defense*, *N.Y. Times*, October 15, 1968, at 5, col. 4.

Studies in eugenics and genetics would seek to correct and isolate these chromosomal imbalances, thereby producing through selective breeding stronger, more physically attractive and emotionally stable individuals. Surely, such investigations would not be improper.

115. Dr. Paul Ramsey, a professor of religion at Princeton University, cautioned that genetic experiments which lead to changes in the genes of unborn babies are "a violation of man" and "fall below the morally acceptable." *Ethics Issue Seen in Genetic Skills*, *N.Y. Times*, March 31, 1968, at 53, col. 1. Dr. Helmut Thielicke, professor of systematic theology at the University of Hamburg in Germany, commented that experimentation designed to strengthen the bodies of men for purposes of space exploration, for example, could "turn men into machines." He concluded: "Unless it is decided that man must be allowed to evolve in a natural way, progress could create a world of supermen and what was once man, who could reproduce himself, would become a biological homunculus, produced in a test tube."

present-day impact. A.I.D. is not presently undertaken to effect a eugenic goal—the preservation and multiplication of the highly endowed—but simply to permit child-bearing where it would otherwise be impossible. Lawyers, however, should begin anticipating the legal problems which will develop when eugenics and genetic programming of cells are commonly practiced.

V. CONCLUSION

Artificial insemination is shrouded in penumbric haze and, indeed, is viewed through a glass darkly. Yet, despite its lack of general legal recognition, it continues to be practiced in the United States.¹¹⁶ California and Oklahoma, through their judicial and legislative bodies respectively, have seized the initiative and realized that the rather tired conscience of the community can no longer be accepted uncritically in this sphere. Lawyers and scientists must devise a logical and responsible approach which will enable the law to march forward together with science rather than lagging behind it.¹¹⁷ Many courts and legislatures will be unwilling and unprepared to be this creative. Typically, each institution will expect the other to act, with near total inactivity by both the probable result. One consolation—small though it may be—is that some progress has been made toward legalizing artificial insemination.

Controlled breeding is not far behind the legalization of artificial insemination. Man is the last to breed selectively; rather than allow variant experimentation in this sensitive realm, he must de-

116. See, e.g., Note, *Social and Legal Aspects of Human Artificial Insemination*, 1965 WIS. L. REV. 859; W. FINEGOLD, *ARTIFICIAL INSEMINATION* 58 (1964); N. ST. JOHN-STEVAS, *LIFE, DEATH, AND THE LAW* 120 (1961); Comment, *Artificial Insemination: Confusion Compounded*, 3 WAYNE L. REV. 35, 42 (1956).

It is, of course, much more difficult to justify artificial insemination for unmarried females who desire children. No commentator has yet advocated this, but the day may not be too far off when it will be accepted. Recently an unmarried blind school teacher in Pittsburgh, Pennsylvania was one of the first such women to receive permission to adopt a blind child. Buffalo Evening News, Feb. 29, 1968, at 3, col. 1. See also *Single Girl Now May Be Mother*, Buffalo Courier-Express, May 12, 1968, at 66, cols. 1-4, noting cases of adoptions by single, unmarried women in Portland, Oregon, New York City, San Francisco, and the State of Washington. Of equal interest is the fact that single men in New York and Los Angeles are known to be adoptive fathers. There are, however, fewer than 200 such single-parent adoptions throughout the country. If adoption is being allowed under these circumstances, it is reasonable to expect that the time may soon arrive when artificial insemination for single or divorced women will be accepted.

117. Seymour & Koerner, *Artificial Insemination: Present Status in the United States*, 116 J. AM. MED. ASSN. 2747 (1941). These commentators have conducted a study of ten thousand cases of babies born by artificial insemination and have not found one instance of a biologically inferior child born by this technique.

wise appropriate procedures by which to isolate and perpetuate the most desirable human characteristics. Not only will private and public experimentation in eugenics continue, but studies in ways to better living conditions in order to secure more efficient human beings—euthenics—will also be undertaken. The study of the relationship between population control and population quality is, admittedly, in its infancy. But, it is not long before an infant grows into maturity. Perhaps controlled breeding is a dangerous and foolhardy undertaking. Perhaps determining the size and quality of a family is a human right, inextricably related to human dignity. Perhaps attempting to interfere with the natural process of procreation would ruin the very fiber of our culture. One fact does remain: population forecasts indicate that ours will soon be an overpopulated world if appropriate steps are not taken.¹¹⁸ Improve the quality of the population by public supervision? Absurd! Yet, who would have ever dreamed of test-tube babies?

118. The N.Y. Times, March 11, 1968, at 43, reported that the world birth rate is 324,000 daily, while the death rate is 133,000. Of the 133,000 who will die during an average day, 10,000 persons will either have starved to death or have died of malnutrition, and 123,000 persons will have died from other causes, leaving a net gain in total population of approximately 190,000. If these population trends continue, the world's total population will surpass 3.5 billion by next January 1, and will reach to 7 billion between then and the year 2000. If world population continues to grow at the present rate for six hundred years, there will be only one square yard of land per person. P. APPLEMAN, *THE SILENT EXPLOSION* 1 (1965). See also T. MALTHUS, 1 *ESSAY ON THE PRINCIPLES OF POPULATION* 12, 18-19 (Everyman's ed. 1958).